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Jorg Bernard

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EXAMINER

BEKKER, KELLY JO

ART UNIT

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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/697,800	<b>Applicant(s)</b> BERNARD ET AL.	
	<b>Examiner</b> KELLY BEKKER	<b>Art Unit</b> 1781	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 10 January 2011.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 30-33,35-50 and 61-71 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 30-33,35-50 and 61-71 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)          | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

**DETAILED ACTION**

Applicant's amendments made January 10, 2011 have been entered.  
Claims 30-33, 35-50, and 61-71 are remain pending.

***Continued Examination Under 37 CFR 1.114***

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on January 10, 2011 has been entered.

***Request for Information***

The documents referred to in the Non-patent literature submitted by applicant on July 15, 2009 are requested to be identified and provided, if available to applicant or applicant's representative. The non-patent literature is a statement of reasons for rejection of the subject matter which encompasses the instant invention; the statement refers to "cited references", such as "cited reference 1", but does not identify the publication or author(s) of the references. As the cited references are indicated to encompass the instant invention, the information requested would aid in the examination of the application and be relevant to patentability determination.

***Claim Rejections - 35 USC § 112, First Paragraph***

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 30, 32, 33, 35-39, and 42-50 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the

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application was filed, had possession of the claimed invention. Claim 30 recites, “wherein said polysaccharide hydrocolloid is the only hydrocolloid present in said caramel”. Applicant’s disclosure does not have support for the newly added limitation. Although applicant’s disclosure as originally filed has support for the caramel “consisting of” and “comprising” specific ingredients, there is no support in the disclosure as originally filed for the negative limitation of excluding other hydrocolloids from being present in the caramel composition. Claims 32, 33, 35-39, and 42-50 are included in the rejection due to their dependency upon claim 30.

***Claim Rejections - 35 USC § 112, Second Paragraph***

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

The 112 second paragraph rejection of claim 41 as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention, specifically for insufficient antecedent basis has been withdrawn in light of applicant’s amendments made January 10, 2011.

Claim 35 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 35 recites, “caramel as in Claim 30, where the noncrystalline sweetener phase of the soft caramel base mass is formed of glucose syrup or starch hydrolysate or both”; Claim 30 recites, “a noncrystalline sweetener phase which is formed of maltitol syrup, polydextrose or hydrogenated starch hydrolysate or a mixture of two or three thereof”; thus, claim 35 appears to conflict and further broaden the limitations of claim 30 with the inclusion of glucose syrup. For the purpose of examination, the claims will be considered as including glucose syrup as a possible noncrystalline sweetener.

***Claim Rejections - 35 USC § 103***

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

The 103(a) rejection of claim 41 as being unpatentable over Barrett et al. (US 6531174 B2) in view of Koji et al. (JP 40119164A as translated by the USPTO May 2008) has been withdrawn in light of applicant's amendments made January 10, 2011, specifically, the amendment had changed the dependency of the claim.

The 103(a) rejection of claims 31, 40, 62-64, and 67-70 as being unpatentable over Barrett et al. (US 6531174 B2) in view of the combination of Koji et al. (JP 40119164A as translated by the USPTO May 2008) and Igoe et al (Dictionary of Food Ingredients 3<sup>rd</sup> Edition, page 107) has been withdrawn in light of applicant's amendments made January 10, 2011, specifically the references do not teach the fat as hydrogenated palm kernel fat as recited in claim 62.

The 103(a) rejection of claims 61, 65, 66, and 71 as being unpatentable over Barrett et al. (US 6531174 B2) in view of the combination of Koji et al. (JP 40119164A as translated by the USPTO May 2008) and Igoe (Dictionary of Food Ingredients 3<sup>rd</sup> Edition page 107), further in view of Willibald-Ettle et al. (US 6458400 B1) has been withdrawn in light of applicant's amendments made January 10, 2011, specifically the references do not teach the fat as hydrogenated palm kernel fat as recited in claim 62.

Barrett

Claims 30, 32, 33, 35, 38, 39, 42, 44-47, and 49 are rejected under 35 U.S.C. 103(a) as being unpatentable over Barrett et al. (US 6531174 B2) in view of Koji et al. (JP 40119164A as translated by the USPTO May 2008).

Barrett et al (Barrett) teaches of a composition that is a sweet composition made from syrup, fat, and a sweetener solution by boiling (Abstract and Example 2) and as Applicant defines "soft caramel" as "a sweet that is made from syrup, fat, and a sweetener solution by boiling" (See specification, page 3 paragraph 4), Barrett teaches of a soft caramel as instantly claimed. Barrett teaches that preferably all of the gelatin in the product is replaced, and thus the product is gelatin free (abstract). Barrett teaches

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that the caramel contains polysaccharide hydrocolloid is selected from the group including gum arabic, gellan gum, and combinations thereof (Column 2 lines 23-29). Barrett teaches that the caramel composition contains about 0-10% gum arabic (Column 4 lines 33-35). Barrett teaches that the caramel composition contains 0.5-5% additional ingredients and teaches gellan gum as an additional ingredient, thus teaching the composition comprises about 0.5-5% gellan gum (Column 2 lines 19-27). Barrett clearly teaches in claim 17, a combination of gum arabic and an additional hydrocolloid, including gellan gum. Thus, Barrett teaches that the ratio of gum arabic (0-10%) to gellan gum (0.5-5%) is a ratio of 0-20:1. Barrett teaches that the caramel contains a crystalline sweetener phase in combination with a non crystalline sweetener phase (Examples 1-3). Barrett teaches that the non-crystalline sweetener phase is formed of maltitol syrup and/or glucose syrup (Column 4 lines 39-54 and Column 5 lines 30-35). Barrett teaches that the caramel can include crystalline sucrose which can be replaced entirely with sugar substitutes, thus teaching that the caramel can be sucrose free (Column 4 lines 39-54). Barrett teaches that different types of sugar systems are used to manipulate the final texture properties of the final product, for example a chewing product will include a crystalline sugar (Column 4 lines 50-53). Barrett teaches that the composition contains about 0.5-20%, preferably about 2-12% fat (Column 5 lines 12-15). Barrett teaches that the caramel contains emulsifiers, artificial sweeteners, flavor enhancers, and coloring agents, such as natural and synthetic food dyes (Column 5 lines 16-24 and 34-39). Barrett teaches that the caramel contains about 0.1-5% milk proteins (Column 5 lines 16-24). Barrett teaches that the caramel composition contains essential oils (Column 2 lines 58-68). Barrett teaches that the caramel composition contains about 2-10% water (Column 2 lines 10-12). Barrett teaches that the caramel composition contains medicinal active agents, such as vitamins, minerals, and herbal extracts (Column 3 lines 60-67).

Regarding the polysaccharide hydrocolloid as a texturizing agent, as Barrett teaches of the same compositional ingredient, gum arabic, as instantly claimed, one of ordinary skill in the art would expect that the gum arabic as taught by Barrett inherently

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function in the same manner as the instantly claimed ingredient, absent any clear and convincing arguments and/or evidence to the contrary.

Regarding the polysaccharide hydrocolloid as the only hydrocolloid present in the caramel, as stated above, the instantly claimed limitation does not have support as originally filed. Furthermore, although modified starch is not included in the polysaccharide hydrocolloids listed in the claims, as modified food starch, such as taught by Barrett is disclosed as a polysaccharide hydrocolloid that may be included in the caramel composition of the instant invention, one of ordinary skill in the art would not expect that the inclusion of such a starch would patentably distinguish the claimed invention from the prior art. To substitute one functional hydrocolloid for another would have been obvious and routine determination to one of ordinary skill in the art, one of ordinary skill in the art would have been motivated to use an alternative hydrocolloid to the modified starch as taught by Barrett, when such a hydrocolloid was not available or was not affordable.

Barrett is silent to the crystalline sweetener phase as isomaltulose as recited in claim 30.

Koji et al. (Koji) teaches of a caramel composition which has improved taste, with little induction of dental caries, outstanding shapability and shape retentivity without the need for addition of sucrose, formed by incorporating palatinose, i.e. isomaltulose (Abstract).

Regarding the crystalline sweetener phase as isomaltulose, it would have been obvious to one of ordinary skill in the art at the time the invention was made to substitute palatinose or a combination of palatinose and sucrose for a portion of the sugar in the caramel composition as taught by Barrett in view of Koji. One would have been motivated to do so for the benefits of palatinose or isomaltulose, such an improved dental candy as taught by Koji, and to obtain improved taste and shape of the caramel composition as taught by Koji.

Regarding the limitation wherein the isomaltulose is the only crystalline sweetener present in the caramel, Barrett teaches that all the sugar can be replaced with a sugar replacer (Column 4 lines 45-48) and Koji teaches that isomaltulose is

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preferably the only crystalline sweetener in combination with a sugar syrup (page 6 lines 4-14). It would have been obvious to one of ordinary skill in the art at the time the invention was made for the only crystalline sugar to be isomaltulose since Barrett teaches that all the sugar can be replaced with a sugar replacer; Koji teaches that isomaltulose is preferably be the only crystalline sweetener in combination with a sugar syrup (page 6 lines 4-14); and to do so would remove all of the sucrose in the caramel and maximize the benefit of the isomaltulose.

Claims 36, 37, 43, 48, and 50 are rejected under 35 U.S.C. 103(a) as being unpatentable over Barrett et al. (US 6531174 B2) in view of Koji et al. (JP 40119164A as translated by the USPTO May 2008), further in view of Willibald-Ettle et al. (US 6458400 B1).

Barrett teach of a caramel composition as discussed above. Barrett is silent to the caramel as containing a high intensity sweetener as recited in claim 36, selected from a specific group including saccharin as recited in claims 37 and 48, a specific food dye, such as riboflavin, as recited in claim 43, and an active substance, such as mentholeucalyptus as recited in claim 50.

Willibald-Ettle (Willibald) teach of soft confections and the use of sweeteners in those confections (abstract). Willibald teaches that intensive sweeteners, including saccharin are add to confections to increase the sweetening power (Column 3 lines 25-34). Willibald teaches a suitable colorant for confectionary materials is riboflavin (Column 3 lines 34-44). Willibald teaches that suitable additives for confections include clinically active substances, such as mentholeucalyptus (Column 3 lines 5-17).

Regarding the caramel as containing a high intensity sweetener, such as saccharin, it would have been obvious to one of ordinary skill in the art at the time the invention was made to select a combination of sweeteners depending on the desired sweetness of the final product. One would have been motivated to add saccharin, i.e. a high intensity sweetener, in order to increase the sweetness of the final product with minimal amounts of the ingredient. Such was commonly done as shown by Willibald

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and would have been within the ordinary skill and ingenuity of one of ordinary skill in the art.

Regarding the caramel as containing a specific food dye, such as riboflavin, it would have been obvious to one of ordinary skill in the art at the time the invention was made to include a colorant, such as riboflavin, in the confectionary product depending on the desired color of the final confectionary product. Such was commonly done as shown by Willibald and would have been within the ordinary skill and ingenuity of one of ordinary skill in the art.

Regarding the caramel as containing an active substance, such as mentholeucalyptus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to include a known medicament for confectionary materials depending on the desired effect of the confection during consumption, i.e. one of ordinary skill in the art at the time the invention was made would have been motivated to include mentholeucalyptus in the caramel confection in order to obtain a final product that had a soothing throat effect when consumed. Such was commonly done as shown by Willibald and would have been within the ordinary skill and ingenuity of one of ordinary skill in the art.

Claims 31, 40, 41, 62-64, and 67-70 are rejected under 35 U.S.C. 103(a) as being unpatentable over Barrett et al. (US 6531174 B2) in view of the combination of Koji et al. (JP 40119164A as translated by the USPTO May 2008) and Igoe et al (Dictionary of Food Ingredients 3<sup>rd</sup> Edition, page 107) and Lees et al (Sugar Confectionary and Chocolate Manufacture pages 191, 196, and 197).

Barrett et al (Barrett) teaches of a composition that is a sweet composition made from syrup, fat, and a sweetener solution by boiling (Abstract and Example 2) and as Applicant defines "soft caramel" as "a sweet that is made from syrup, fat, and a sweetener solution by boiling" (See specification, page 3 paragraph 4), Barrett teaches of a soft caramel as instantly claimed. Barrett teaches that preferably all of the gelatin in the product is replaced, and thus the product is gelatin free (abstract). Barrett teaches that the caramel contains polysaccharide hydrocolloid is selected from the group

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including gum arabic, gellan gum, and combinations thereof (Column 2 lines 23-29). Barrett teaches that the caramel composition contains about 0-10% gum arabic (Column 4 lines 33-35). Barrett teaches that the caramel composition contains 0.5-5% additional ingredients and teaches gellan gum as an additional ingredient, thus teaching the composition comprises about 0.5-5% gellan gum (Column 2 lines 19-27). Barrett clearly teaches in claim 17, a combination of gum arabic and an additional hydrocolloid, including gellan gum. Thus, Barrett teaches that the ratio of gum arabic (0-10%) to gellan gum (0.5-5%) is a ratio of 0-20:1. Barrett teaches that the caramel contains a crystalline sweetener phase in combination with a non crystalline sweetener phase (Examples 1-3). Barrett teaches that the non-crystalline sweetener phase is formed of maltitol syrup and/or glucose syrup (Column 4 lines 39-54 and Column 5 lines 30-35). Barrett teaches that the caramel can include crystalline sucrose which can be replaced entirely with sugar substitutes, thus teaching that the caramel can be sucrose free (Column 4 lines 39-54). Barrett teaches that different types of sugar systems are used to manipulate the final texture properties of the final product, for example a chewing product will include a crystalline sugar (Column 4 lines 50-53). Barrett teaches that the composition contains about 0.5-20%, preferably about 2-12% fat (Column 5 lines 12-15). Barrett teaches that the caramel contains emulsifiers, artificial sweeteners, flavor enhancers, and coloring agents, such as natural and synthetic food dyes (Column 5 lines 16-24 and 34-39). Barrett teaches that the caramel contains about 0.1-5% milk proteins (Column 5 lines 16-24). Barrett teaches that the caramel composition contains essential oils (Column 2 lines 58-68). Barrett teaches that the caramel composition contains about 2-10% water (Column 2 lines 10-12). Barrett teaches that the caramel composition contains medicinal active agents, such as vitamins, minerals, and herbal extracts (Column 3 lines 60-67).

Barrett is silent to the crystalline sweetener phase as isomaltulose and to the caramel as comprising polydextrose and hydrogenated palm kernel fat as recited in claim 62.

Koji et al. (Koji) teaches of a caramel composition which has improved taste, with little induction of dental caries, outstanding shapability and shape retentivity without the

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need for addition of sucrose, formed by incorporating palatinose, i.e. isomaltulose (Abstract).

Igoe et al (Igoe) teaches that polydextrose is a bulking agent that contains small amounts of bound sorbitol and citric acid. Igoe teaches that polydextrose is a water soluble powder which is a reduced calorie bulking agent that can be used to partially replace sugars. Igoe teaches that polydextrose also functions as a bodying agent and humectant. Igoe teaches that polydextrose is applied in foods and candy compositions. Refer to page 107.

Lees et al (Lees) teaches that good quality caramel comprises about 45 parts by weight of hardened palm kernel oil (page 191). Lees teaches that fat comprises from 4-20% of caramels and provides a significant contribution to texture, chew characteristics, color, and flavor (page 196). Lees teaches that choice of fat is dependant on the ultimate market for the caramels (pages 196 and 197). Lees teaches that the main bulk fats in caramel are vegetable oils, in particular hydrogenated or hardened palm kernel oil (page 196).

Regarding the crystalline sweetener phase as isomaltulose, it would have been obvious to one of ordinary skill in the art at the time the invention was made to substitute palatinose or a combination of palatinose and sucrose for a portion of the sugar in the caramel composition as taught by Barrett in view of Koji. One would have been motivated to do so for the benefits of palatinose or isomaltulose, such an improved dental candy as taught by Koji, and to obtain improved taste and shape of the caramel composition as taught by Koji.

Regarding the limitation wherein the isomaltulose is the only crystalline sweetener present in the caramel, Barrett teaches that all the sugar can be replaced with a sugar replacer (Column 4 lines 45-48) and Koji teaches that isomaltulose is preferably be the only crystalline sweetener in combination with a sugar syrup (page 6 lines 4-14). It would have been obvious to one of ordinary skill in the art at the time the invention was made for the only crystalline sugar to be isomaltulose since Barrett teaches that all the sugar can be replaced with a sugar replacer; Koji teaches that isomaltulose is preferably be the only crystalline sweetener in combination with a sugar

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syrup (page 6 lines 4-14); and to do so would remove all of the sucrose in the caramel and maximize the benefit of the isomaltulose.

Regarding the caramel as comprising polydextrose, it would have been obvious to one of ordinary skill in the art at the time the invention was made for the caramel composition as taught by Barrett to include polydextrose in view of Igoe as Barrett teaches of a caramel composition which optionally comprises humectants (Column 2 lines 13-16), in which sugar can be replaced (Column 4 lines 45-48), and which includes citric acids (Column 5 lines 3-8) and Igoe teaches that polydextrose is a humectant and sugar replacer that contains citric acid. To use a conventionally known ingredient for its known and intended function would have been obvious and routine determination to one of ordinary skill in the art.

Regarding the caramel as comprising hydrogenated palm kernel oil, Barrett teaches that the soft caramel comprises 0.5-20%, preferably 2-10% fat (Column 5 lines 12-15), it would have been obvious to one of ordinary skill in the art for the fat as taught by Barrett to be hydrogenated palm kernel fat, as hydrogenated palm kernel fat was a known and conventional fat which was known to produce good caramel products as taught by Lees.

Claims 61, 65, 66, and 71 are rejected under 35 U.S.C. 103(a) as being unpatentable over Barrett et al. (US 6531174 B2) in view of the combination of Koji et al. (JP 40119164A as translated by the USPTO May 2008) and Igoe (Dictionary of Food Ingredients 3<sup>rd</sup> Edition page 107) and Lees et al (Sugar Confectionary and Chocolate Manufacture pages 191, 196, and 197), further in view of Willibald-Ettle et al. (US 6458400 B1).

Barrett teach of a caramel composition as discussed above. Barrett is silent to the caramel as containing a high intensity sweetener as recited in claim 65, selected from a specific group including saccharin as recited in claims 66 and 71, and an active substance, such as mentholeucalyptus as recited in claim 61.

Willibald-Ettle (Willibald) teach of soft confections and the use of sweeteners in those confections (abstract). Willibald teaches that intensive sweeteners, including

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saccharin are add to confections to increase the sweetening power (Column 3 lines 25-34). Willibald teaches a suitable colorant for confectionary materials is riboflavin (Column 3 lines 34-44). Willibald teaches that suitable additives for confections include clinically active substances, such as mentholeucalyptus (Column 3 lines 5-17).

Regarding the caramel as containing a high intensity sweetener, such as saccharin, it would have been obvious to one of ordinary skill in the art at the time the invention was made to select a combination of sweeteners depending on the desired sweetness of the final product. One would have been motivated to add saccharin, i.e. a high intensity sweetener, in order to increase the sweetness of the final product with minimal amounts of the ingredient. Such was commonly done as shown by Willibald and would have been within the ordinary skill and ingenuity of one of ordinary skill in the art.

Regarding the caramel as containing a specific food dye, such as riboflavin, it would have been obvious to one of ordinary skill in the art at the time the invention was made to include a colorant, such as riboflavin, in the confectionary product depending on the desired color of the final confectionary product. Such was commonly done as shown by Willibald and would have been within the ordinary skill and ingenuity of one of ordinary skill in the art.

Regarding the caramel as containing an active substance, such as mentholeucalyptus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to include a known medicament for confectionary materials depending on the desired effect of the confection during consumption, i.e. one of ordinary skill in the art at the time the invention was made would have been motivated to include mentholeucalyptus in the caramel confection in order to obtain a final product that had a soothing throat effect when consumed. Such was commonly done as shown by Willibald and would have been within the ordinary skill and ingenuity of one of ordinary skill in the art.

Nakano

Claims 30, 35-39, and 44-49 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nakano et al (JP Pub No. 09-023819- online translation of reference with tables, as provided translated by applicant) in view of Applicant's Admitted Prior Art (Background of the Specification) and Koji et al. (JP 40119164A as translated by the USPTO May 2008) and Igoe et al (Dictionary of Food Ingredients 3<sup>rd</sup> Edition, pages 40, 64, and 65), and Lees et al (Sugar Confectionary & Chocolate Manufacture, pages 191, 192, 196, 197).

Nakano et al (Nakano) teaches of a soft candy, including caramel (paragraphs 0001 and 0002). Nakano teaches that the confection comprises a crystalline sugar ingredient which may be sucrose or sugars other than sucrose (paragraphs 0005 and 0007); amorphous sugars, i.e. a non-crystalline sweetener phase, including starch syrups (paragraphs 0005 and 0009); a bond ingredient which is one or more known ingredients including gum arabic, gaur gum, locust bean gum, pullulan, gelatin, etc, and gum arabic is preferred for the bite and feeling provided (paragraphs 0005 and 0010); a binding control ingredient which includes 3-20%, preferably 8-15% fats, including modified and vegetable fats and 0.5-3% emulsifiers (paragraphs 0005 and 0011); and 3-13% water (paragraph 0017). Nakano teaches that optional ingredients, including starch, which is a polysaccharide hydrocolloid as defined by applicant, dairy products, such as milk proteins, artificial sweeteners including saccharine, coloring agents, various nutrients, such as known medicine agents, and flavors may be included in the caramel (paragraph 0008).

Regarding the product as gelatin free, as Nakano teaches that the bond ingredient which is one or more known ingredients including gum arabic, gaur gum, locust bean gum, pullulan, gelatin, etc, and gum arabic is preferred for the bite and feeling provided, the teachings of Nakano encompass the teachings of a composition with gum arabic as the only bond ingredient, and wherein gelatin is not required and thus may be excluded from the composition. As Nakano teaches that gelatin is not necessary within the confectionary composition, and as gelatin was known to be disapproved by certain consumer groups (such as admitted by applicant Specification

page 1, paragraph 4), it would have been obvious to one of ordinary skill in the art to specifically exclude gelatin from the food product of Nakano.

Regarding the caramel as comprising a soft caramel base, as Nakano teaches of a caramel composition which is substantially the same as the instantly claimed caramel composition, including with respect to a crystalline and non-crystalline ingredient, and total moisture content, one of ordinary skill in the art would expect that the caramel as taught by Nakano is substantially the same as the instantly claimed product, absent any clear and convincing arguments and/or evidence to the contrary.

Regarding the hydrocolloid as a texturizing agent, as Nakano teaches of the same hydrocolloids as instantly claimed, including starch and gum arabic, one of ordinary skill in the art would expect that the hydrocolloid compositional ingredients of Nakano, inherently function the same as the instantly claimed hydrocolloids, absent any clear and convincing arguments and/or evidence to the contrary.

Nakano is silent to the crystalline sweetener phase as isomaltulose, wherein the isomaltulose is the only crystalline sweetener in the caramel and the caramel is sucrose free and to the amorphous sugar syrup as maltitol syrup, polydextrose, or hydrogenated starch hydrolysate or mixtures thereof as recited in claim 30, preferably glucose syrup or starch hydrolysate or both as recited in claim 35, and to a specific flavoring agent as recited in claim 45.

Koji et al. (Koji) teaches of a caramel composition which has improved taste, with little induction of dental caries, outstanding shapability and shape retentivity without the need for addition of sucrose, formed by incorporating palatinose, i.e. isomaltulose (Abstract).

Igoe et al (Igoe), page 40, teaches that corn syrup, which is also termed glucose syrup, was a known sweetener derived from the hydrolysis of starch. Igoe, page 40, teaches that glucose syrup is used as a replacement for sucrose, it can control crystallization in candy making, and provide palatability to confections.

Lees et al (Lees) teaches that good quality caramel comprises about 45 parts by weight of hardened palm kernel oil (page 191). Lees teaches that fat comprises from 4-20% of caramels and provides a significant contribution to texture, chew characteristics,

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color, and flavor (page 196). Lees teaches that choice of fat is dependant on the ultimate market for the caramels (pages 196 and 197). Lees teaches that the main bulk fats in caramel are vegetable oils, in particular hydrogenated or hardened palm kernel oil (page 196). Lees teaches that casein, a milk protein, is a major component of milk solids, which are known to be included in caramels. Lees teaches that the casein contributes hardness to the product and that additional casein can be added to caramels being exported to hot climates to increase their resistance to graining. Refer to page 196. Lees teaches that glucose syrup was known to be included in good quality caramel compositions (page 191). Lees teaches that peppermint oil and spearmint oil was known to be included in caramel and caramel related products (page 192).

Regarding the crystalline sweetener phase as isomaltulose, it would have been obvious to one of ordinary skill in the art at the time the invention was made to substitute palatinose or a combination of palatinose and sucrose for a portion of the sugar in the caramel composition as taught by Nakano in view of Koji. One would have been motivated to do so for the benefits of palatinose or isomaltulose, such an improved dental candy as taught by Koji, and to obtain improved taste and shape of the caramel composition as taught by Koji.

Regarding the limitation wherein the isomaltulose is the only crystalline sweetener present in the caramel and the caramel as sucrose free, Koji teaches that isomaltulose is preferably be the only crystalline sweetener in combination with a sugar syrup (page 6 lines 4-14). It would have been obvious to one of ordinary skill in the art at the time the invention was made for the only crystalline sugar to be isomaltulose, wherein the caramel was sucrose free, since Nakano teaches that one material may be used for the crystalline sweetener; Sucrose was known to cause dental carries; Koji teaches that isomaltulose is preferably be the only crystalline sweetener in combination with a sugar syrup (page 6 lines 4-14); and to do so would maximize the benefit of the isomaltulose.

Regarding the amorphous sugar syrup as maltitol syrup, polydextrose, or hydrogenated starch hydrolysate or mixtures thereof, preferably glucose syrup or starch hydrolysate or both, as Nakano teaches the use of starch syrups as the amorphous

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sweetener in the caramel composition, and as Lees teaches that glucose syrup is included in good quality caramels, and as Igoe teaches that glucose syrup was a known starch syrup which controlled crystallization and provided pliability in confections, it would have been obvious and within the routine determination of one of ordinary skill in the art for the confection of Nakano to include glucose syrup as the amorphous sweetener phase. One would have been specifically motivated to use the glucose syrup as it was suggested by Nakano with the use of starch syrup, as it was known to be included in good quality caramels as taught by Lees, and as it provided the added benefits of controlled crystallization and pliability as taught by Igoe.

Regarding a specific flavoring agent within the caramel composition as taught by Nakano, one of ordinary skill in the art would have been motivated for the caramel to contain conventional flavorings, including peppermint oil, as taught by Lees, in order to impart a peppermint flavor. As Nakano teaches that the caramel may contain flavorings and as Lees teaches that peppermint oil is a known flavor in caramel compositions, to include peppermint oil would have been obvious and a matter of routine determination to one of ordinary skill in the art.

Claims 32 and 33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nakano et al (JP Pub No. 09-023819- online translation of reference with tables, as provided translated by applicant) in view of Applicant's Admitted Prior Art (Background of the Specification) and Koji et al. (JP 40119164A as translated by the USPTO May 2008) and Igoe et al (Dictionary of Food Ingredients 3<sup>rd</sup> Edition, pages 40, 64, and 65), and Lees et al (Sugar Confectionary & Chocolate Manufacture, pages 191, 192, 196, 197), further in view of Barrett et al. (US 6531174 B2).

Nakano teaches of a caramel composition which contains preferably 3-5% of a bond ingredient which is one or more known ingredients including gum arabic, gaur gum, locust bean gum, pullulan, gelatin, etc, and wherein gum arabic is preferred for the bite and feeling provided, as discussed above.

Nakano is silent to the bond agent as a mixture of gum arabic and gellan gum as recited in claim 32, preferably wherein the ratio of gum arabic to gellan gum is from 5-15 to 1 as recited in claim 33.

Igoe teaches that gellan gum is a polysaccharide gum that reacts to form gels (pages 64-65).

Barrett et al (Barrett) teaches of a chewy confection composition includes 0-10% gum arabic and which may include about 0.5-5% additional ingredients, including gellan gum (Column 2 lines 10-28 and Column 4 lines 33-35). Barrett teaches the composition is a sweet composition made from syrup, fat, and a sweetener solution by boiling (Abstract and Example 2) and as Applicant defines "soft caramel" as "a sweet that is made from syrup, fat, and a sweetener solution by boiling" (See specification, page 3 paragraph 4), Barrett teaches of a soft caramel as instantly claimed.

Regarding the bond agent as a mixture of gum arabic and gellan gum, preferably wherein the ratio of gum arabic to gellan gum is from 5-15 to 1, as discussed above, it would have been obvious to one of ordinary skill in the art for the 3-5% bond agent to be gum arabic to impart bite and a desired feeling as taught by Nakano. As Nakano teaches that other known bond ingredients, such as gellan gum as taught by Igoe, may be combined with the gum arabic, to include a known bond ingredient in a known percentage, such as gellan gum from 0.5-5% as taught by Barrett would have been obvious and routine determination to one of ordinary skill in the art. Thus the composition of Nakano in view of Igoe and Barrett would comprise 3-5% known bonding agent including gum arabic and gellan gum. One of ordinary skill in the art would have been motivated for the bond agent include a majority, including greater than 50%, of gum arabic to impart a strong bite and desired taste. One of ordinary skill in the art would have been motivated to use an additional bond agent, which was known to be included within caramel compositions, in order to impart bonding while preventing the bite of the gum arabic from becoming too over powering. To use known gelling agents within the caramel composition, within known amounts would have been obvious and routine determination to one of ordinary skill in the art. Applicant has not shown that such gelling agents provide for nothing more than expected results of bonding.

Claims 42, 43, and 50 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nakano et al (JP Pub No. 09-023819- online translation of reference with tables, as provided translated by applicant) in view of Applicant's Admitted Prior Art (Background of the Specification) and Koji et al. (JP 40119164A as translated by the USPTO May 2008) and Iggo et al (Dictionary of Food Ingredients 3<sup>rd</sup> Edition, pages 40, 64, and 65), and Lees et al (Sugar Confectionary & Chocolate Manufacture, pages 191, 192, 196, 197), further in view of Willibald-Ettle et al. (US 6458400 B1).

Nakano teaches of a caramel composition which contains optional ingredients, including starch, which is a polysaccharide hydrocolloid as defined by applicant, dairy products, such as milk proteins, artificial sweeteners including saccharine, coloring agents, various nutrients, such as known medicine agents, and flavors as discussed above.

Nakano is silent to the coloring as a natural or synthetic food dye as recited in claim 42, to a specific type of dye as recited in claim 43, and to a specific medicinal agent as recited in claim 50.

Willibald-Ettle (Willibald) teach of soft confections and the use of sweeteners in those confections (abstract). Willibald teaches a suitable colorant for confectionary materials is riboflavin, which is a food dye (Column 3 lines 34-44). Willibald teaches that suitable additives for confections include clinically active substances, such as mentholeucalyptus (Column 3 lines 5-17).

Regarding the caramel as containing a specific food colorant, including a food dye, such as riboflavin, it would have been obvious to one of ordinary skill in the art at the time the invention was made to include a dye, such as riboflavin, in the confectionary product depending on the desired color of the final confectionary product. Such was commonly done as shown by Willibald and would have been within the ordinary skill and ingenuity of one of ordinary skill in the art.

Regarding the caramel as containing an active substance, such as mentholeucalyptus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to include a known medicament for confectionary materials

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depending on the desired effect of the confection during consumption, i.e. one of ordinary skill in the art at the time the invention was made would have been motivated to include mentholeucalyptus in the caramel confection in order to obtain a final product that had a soothing throat effect when consumed. Such was commonly done as shown by Willibald and would have been within the ordinary skill and ingenuity of one of ordinary skill in the art.

Claims 31, 62, and 65-71 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nakano et al (JP Pub No. 09-023819- online translation of reference with tables, as provided translated by applicant) in view of Applicant's Admitted Prior Art (Background of the Specification) and Koji et al. (JP 40119164A as translated by the USPTO May 2008) and Lees et al (Sugar Confectionary and Chocolate Manufacture pages 191, 196, and 197) and Sault et al (US 2003/0161914 A1) and Igoe et al (Dictionary of Food Ingredients, 3<sup>rd</sup> Edition, pages 64, 65, and 107).

Nakano et al (Nakano) teaches of a soft candy, including caramel (paragraphs 0001 and 0002). Nakano teaches that the confection comprises a crystalline sugar ingredient which may be sucrose or sugars other than sucrose (paragraphs 0005 and 0007); amorphous sugars, i.e. a non-crystalline sweetener phase, including starch syrups (paragraphs 0005 and 0009); a bond ingredient which is one or more known ingredients including gum arabic, gaur gum, locust bean gum, pullulan, gelatin, etc, and gum arabic is preferred for the bite and feeling provided (paragraphs 0005 and 0010); a binding control ingredient which includes 3-20%, preferably 8-15% fats, including modified and vegetable fats and 0.5-3% emulsifiers (paragraphs 0005 and 0011); and 3-13% water (paragraph 0017). Nakano teaches that optional ingredients, including starch, which is a polysaccharide hydrocolloid as defined by applicant, dairy products, such as milk proteins, artificial sweeteners including saccharine, coloring agents, various nutrients, such as known medicine agents, and flavors may be included in the caramel (paragraph 0008).

Regarding the product as gelatin free, as Nakano teaches that the bond ingredient which is one or more known ingredients including gum arabic, gaur gum,

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locust bean gum, pullulan, gelatin, etc, and gum arabic is preferred for the bite and feeling provided, the teachings of Nakano encompass the teachings of a composition with gum arabic as the only bond ingredient, and wherein gelatin is not required and thus may be excluded from the composition. As Nakano teaches that gelatin is not necessary within the confectionary composition, and as gelatin was known to be disapproved by certain consumer groups (such as admitted by applicant Specification page 1, paragraph 4), it would have been obvious to one of ordinary skill in the art to specifically exclude gelatin from the food product of Nakano.

Regarding the caramel as comprising a soft caramel base, as Nakano teaches of a caramel composition which is substantially the same as the instantly claimed caramel composition, including with respect to a crystalline and non-crystalline ingredient, and total moisture content, one of ordinary skill in the art would expect that the caramel as taught by Nakano is substantially the same as the instantly claimed product, absent any clear and convincing arguments and/or evidence to the contrary.

Regarding the hydrocolloid as a texturizing agent, as Nakano teaches of the same hydrocolloids as instantly claimed, including starch and gum arabic, one of ordinary skill in the art would expect that the hydrocolloid compositional ingredients of Nakano, inherently function the same as the instantly claimed hydrocolloids, absent any clear and convincing arguments and/or evidence to the contrary.

Nakano is silent to the caramel as comprising polydextrose and hydrogenated palm kernel fat, and to the crystalline sweetener phase as isomaltulose, wherein the isomaltulose is the only crystalline sweetener in the caramel and the caramel is sucrose free as recited in claim 62.

Koji et al. (Koji) teaches of a caramel composition which has improved taste, with little induction of dental caries, outstanding shapability and shape retentivity without the need for addition of sucrose, formed by incorporating palatinose, i.e. isomaltulose (Abstract).

Lees et al (Lees) teaches that good quality caramel comprises about 45 parts by weight of hardened palm kernel oil (page 191). Lees teaches that fat comprises from 4-20% of caramels and provides a significant contribution to texture, chew characteristics,

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color, and flavor (page 196). Lees teaches that choice of fat is dependant on the ultimate market for the caramels (pages 196 and 197). Lees teaches that the main bulk fats in caramel are vegetable oils, in particular hydrogenated or hardened palm kernel oil (page 196).

Igoe et al (Igoe) teaches that polydextrose is a bulking agent that contains small amounts of bound sorbitol and citric acid. Igoe teaches that polydextrose is a water soluble powder which is a reduced calorie bulking agent that can be used to partially replace sugars. Igoe teaches that polydextrose also functions as a bodying agent and humectant. Igoe teaches that polydextrose is applied in foods and candy compositions. Refer to page 107.

Sault et al (Sault) teaches of soft caramel compositions (abstract and paragraph 0020). Sault teaches that the caramel products contain carbohydrates, including in liquid form and including polydextrose (paragraph 0007 and claims 5 and 7).

Regarding the caramel as comprising polydextrose, it would have been obvious and routine determination to one of ordinary skill in the art to include conventional caramel ingredients, including polydextrose as taught by Sault, within the caramel composition of Nakano. One of ordinary skill in the art would have been specifically motivated to use polydextrose for its known functions, including in order to add body and an additional humectant for binding water within the composition as taught by Igoe.

Regarding the caramel as comprising hydrogenated palm kernel oil, Nakano teaches that the caramel comprises 3-20%, preferably 8-15% fat, it would have been obvious to one of ordinary skill in the art for the fat as taught by Nakano to be hydrogenated palm kernel fat, as hydrogenated palm kernel fat was a known and conventional fat which was known to produce good caramel products as taught by Lees.

Regarding the crystalline sweetener phase as isomaltulose, it would have been obvious to one of ordinary skill in the art at the time the invention was made to substitute palatinose or a combination of palatinose and sucrose for a portion of the sugar in the caramel composition as taught by Nakano in view of Koji. One would have been motivated to do so for the benefits of palatinose or isomaltulose, such an improved

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dental candy as taught by Koji, and to obtain improved taste and shape of the caramel composition as taught by Koji.

Regarding the limitation wherein the isomaltulose is the only crystalline sweetener present in the caramel and the caramel as sucrose free, Koji teaches that isomaltulose is preferably be the only crystalline sweetener in combination with a sugar syrup (page 6 lines 4-14). It would have been obvious to one of ordinary skill in the art at the time the invention was made for the only crystalline sugar to be isomaltulose, wherein the caramel was sucrose free, since Nakano teaches that one material may be used for the crystalline sweetener; Sucrose was known to cause dental carries; Koji teaches that isomaltulose is preferably be the only crystalline sweetener in combination with a sugar syrup (page 6 lines 4-14); and to do so would maximize the benefit of the isomaltulose.

Claims 40, 41, 63, and 64 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nakano et al (JP Pub No. 09-023819- online translation of reference with tables, as provided translated by applicant) in view of Applicant's Admitted Prior Art (Background of the Specification) and Koji et al. (JP 40119164A as translated by the USPTO May 2008) and Lees et al (Sugar Confectionary and Chocolate Manufacture pages 191, 196, and 197) and Sault et al (US 2003/0161914 A1) and Igoe et al (Dictionary of Food Ingredients, 3<sup>rd</sup> Edition, pages 64, 65, and 107), further in view of Barrett et al (US 6,531,174 B2).

Nakano teaches of a caramel composition which contains optional ingredients including milk products, and preferably 3-5% of a bond ingredient which is one or more known ingredients including gum arabic, gaur gum, locust bean gum, pullulan, gelatin, etc, and wherein gum arabic is preferred for the bite and feeling provided, as discussed above.

Nakano is silent to the caramel as comprising greater than 0 to up to 5% of at least one protein as recited in claim 40, wherein the protein component includes milk protein as recited in claim 41, and to the polysaccharide as a mixture of gum arabic and

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gellan gum as recited in claim 63, wherein the ratio of gum arabic to gellan gum is from 5:1 to 15:1 as recited in claim 64.

Lees teaches that casein, a milk protein, is a major component of milk solids, which are known to be included in caramels. Lees teaches that the casein contributes hardness to the product and that additional casein can be added to caramels being exported to hot climates to increase their resistance to graining. Refer to page 196.

Igoe teaches that gellan gum is a polysaccharide gum that reacts to form gels (pages 64-65).

Barrett et al (Barrett) teaches of a chewy confection composition includes 0-10% gum arabic and which may include about 0.5-5% additional ingredients, including gellan gum (Column 2 lines 10-28 and Column 4 lines 33-35). Barrett teaches the composition is a sweet composition made from syrup, fat, and a sweetener solution by boiling (Abstract and Example 2) and as Applicant defines "soft caramel" as "a sweet that is made from syrup, fat, and a sweetener solution by boiling" (See specification, page 3 paragraph 4), Barrett teaches of a soft caramel as instantly claimed. Barrett teaches that protein was included in the composition as an optional ingredient form about 0.5-5% (claims 7 and 8).

Regarding the caramel as comprising greater than 0 to up to 5% of at least one protein, wherein the protein component includes milk protein, it would have been obvious to one of ordinary skill in the art for the caramel as taught by Nakano to include the milk protein casein in order to increase the hardness of the product and to increase the resistance to graining for caramels bound for hot climates, as taught by Lees. One of ordinary skill in the art would have been motivated to limit the amount of casein within the product to prevent the caramel from becoming too hard. Thus, the percentage of proteins, specifically the milk protein casein, within the caramel composition of Nakano in view of Lees would be a result effective variable readily determined by one of ordinary skill in the art based upon the hardness of the final product desired and the climate to which the caramels were to be transported. Furthermore, it is noted that the range of about 0.1-5% of milk proteins was known to be included in caramel compositions, such as taught by Barrett (Column 5 lines 16-24). As Nakano does not

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teach the caramel contains any other proteins, the milk protein casein, would contribute the entire protein proportion of the product.

Regarding the bond agent as a mixture of gum arabic and gellan gum, preferably wherein the ratio of gum arabic to gellan gum is from 5-15 to 1, as discussed above, it would have been obvious to one of ordinary skill in the art for the 3-5% bond agent to be gum arabic to impart bite and a desired feeling as taught by Nakano. As Nakano teaches that other known bond ingredients, such as gellan gum as taught by Igoe, may be combined with the gum arabic, to include a known caramel bond ingredient in a known percentage, such as from 0.5-5% as taught by Barrett would have been obvious and routine determination to one of ordinary skill in the art. Thus the composition of Nakano in view of Igoe and Barrett would comprise 3-5% known bonding agent including gum arabic and gellan gum. One of ordinary skill in the art would have been motivated to for the bond agent include a majority, including greater than 50%, of gum arabic to impart bite and desired taste. One of ordinary skill in the art would have been motivated to use an additional bond agent, that was known to be included within caramel compositions, in order to impart binding while preventing the bite of the gum arabic from becoming too strong. To use known gelling agents within the caramel composition, within known amounts would have been obvious and routine determination to one of ordinary skill in the art. Applicant has not shown that such gelling agents provide for nothing more than expected results of bonding.

Claim 61 is rejected under 35 U.S.C. 103(a) as being unpatentable over Nakano et al (JP Pub No. 09-023819- online translation of reference with tables, as provided translated by applicant) in view of Applicant's Admitted Prior Art (Background of the Specification) and Koji et al. (JP 40119164A as translated by the USPTO May 2008) and Lees et al (Sugar Confectionary and Chocolate Manufacture pages 191, 196, and 197) and Sault et al (US 2003/0161914 A1) and Igoe et al (Dictionary of Food Ingredients, 3<sup>rd</sup> Edition, pages 64, 65, and 107), further in view of Willibald-Ettle et al. (US 6458400 B1).

Nakano teaches of a caramel composition which contains optional ingredients, including starch, which is a polysaccharide hydrocolloid as defined by applicant, dairy products, such as milk proteins, artificial sweeteners including saccharine, coloring agents, various nutrients, such as known medicine agents, and flavors as discussed above.

Nakano is silent to a specific medicinal agent as recited in claim 61.

Willibald-Ettle (Willibald) teach of soft confections and the use of sweeteners in those confections (abstract). Willibald teaches that suitable additives for confections include clinically active substances, such as mentholeucalyptus (Column 3 lines 5-17).

Regarding the caramel as containing an active substance, such as mentholeucalyptus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to include a known medicament for confectionary materials depending on the desired effect of the confection during consumption, i.e. one of ordinary skill in the art at the time the invention was made would have been motivated to include mentholeucalyptus in the caramel confection in order to obtain a final product that had a soothing throat effect when consumed. Such was commonly done as shown by Willibald and would have been within the ordinary skill and ingenuity of one of ordinary skill in the art.

### ***Response to Arguments***

Applicant's arguments filed January 10, 2011 have been fully considered but they are not persuasive.

Applicant argues that there are surprising and unexpected results because isomaltulose is not temperature stable. Applicant's argument is not convincing as (1) the claims are directed towards a product and not a process; (2) the references of record teach of substantially the same product as instantly claimed and as the references of record teach of a product with isomaltulose at high temperatures and it would be expected that the products of the references would inherently be stable. Therefore, it is unclear as to what is unexpected about the temperature stability of the final product.

Applicant argues that it has been surprisingly established that the combinations of polysaccharide hydrocolloids has properties to enable the complete replacement of gelatin as texturizing agent in soft caramel while retaining special texture and consistency. Applicant's argument is not convincing as the references of record teach of substantially the same product as instantly claimed and as applicant has provided no evidence of criticality or said surprising and unexpected results from the claimed composition.

Applicant argues that all of the claims do not include modified starch as a polysaccharide hydrocolloid; that Barrett requires modified starch as a texturizing agent, which is excluded from the instant claims; and that to exclude the starch of Barrett from the caramel would be to destroy the composition of Barrett. Applicant's argument is not convincing as:

The instant claims 31, 40, 41, and 61-71 recite a caramel comprising certain ingredients, and thus while requiring the specific ingredients listed, including requiring a polysaccharide hydrocolloid as a texturizing agent selected from a specific group, including gum arabic and excluding modified starch, the claims as instantly recited do not exclude modified starch from the caramel composition. Thus, since the Barrett teaches that the caramel contains gum arabic which is a polysaccharide hydrocolloid that would inherently function as a texturizing agent, Barrett teaches of the instantly claimed limitation; as Barrett teaches of the same compositional ingredient, gum arabic, as instantly claimed, one of ordinary skill in the art would expect that the gum arabic as taught by Barrett inherently function in the same manner as the instantly claimed ingredient, absent any clear and convincing arguments and/or evidence to the contrary. The claims do not exclude other texturizing agents and/or modified starch from the caramel composition.

The instant claims, 30, 32, 33, 35-39, and 42-50 recite the exclusion of additional polysaccharides. As stated above, the instantly claimed limitation does not have support as originally filed. Furthermore, although modified starch is not included in the polysaccharide hydrocolloids listed in the claims, as modified food starch, such as taught by Barrett is disclosed as a polysaccharide hydrocolloid that may be included in

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the caramel composition of the instant invention, one of ordinary skill in the art would not expect that the inclusion of such a starch would patentably distinguish the claimed invention from the prior art. To substitute one functional hydrocolloid for another would have been obvious and routine determination to one of ordinary skill in the art, one of ordinary skill in the art would have been motivated to use an alternative hydrocolloid to the modified starch as taught by Barrett, when such a hydrocolloid was not available or was not affordable.

Applicant argues that there is no teaching or suggestion by Barrett of the use of isomaltulose, that all of the examples in Barrett employ a single sweetener which is either sucrose or crystalline sucrose, that Barrett does not recognize a need for a crystalline and non-crystalline sweetener phase free of gelatin, and that Koji does not teach or suggest using a non-crystalline sweetener phase which is maltitol syrup or polydextrose or hydrogenated starch hydrolysate or a combination thereof in combination with a crystalline phase which is isomaltulose together with a polysaccharide hydrocolloid to produce a gelatin free soft caramel.

Applicant's argument is not convincing as:

One cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986);

The examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, applicant's argument is not convincing; and

As stated in the previous office action, Barrett teaches of forming a gelatin free soft caramel (abstract) comprising polysaccharide hydrocolloids, including gum arabic and gellan gum (Column 2 lines 16-28), and preferably a crystalline

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sweetener phase including crystalline sucrose in combination with sugar replacement which is selected from the group including non-crystalline sweetener phases of maltitol and/or glucose syrup which is a starch hydrolysate (Column 4 lines 39-54, Column 5 lines 30-33, and Examples 1-3); Barrett is silent to the crystalline sweetener phase as isomaltulose, wherein isomaltulose is the only crystalline sugar in the composition; Koji teaches of a caramel composition which has improved taste, with little induction of dental caries, outstanding shapability and shape retentivity without the need for addition of sucrose, formed by incorporating palatinose, which is another name for isomaltulose (Abstract); thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to substitute isomaltulose for all of the sucrose, i.e. the crystalline sweetener phase, in the caramel composition as taught by Barrett in view of Koji; As Barrett teaches that all the sugar can be replaced with a sugar replacers (Column 4 lines 45-48) and Koji teaches that isomaltulose is preferably the only crystalline sweetener in combination with a sugar syrup (page 6 lines 4-14), one would have been motivated to substitute isomaltulose for all of the sucrose, i.e. the non-crystalline sweetener phase, in the caramel composition in order to remove sucrose which is harmful to the dental needs of the consumer and to maximize the benefits of the isomaltulose, including the formation of an improved dental candy with improved taste and shape as taught by Koji. Thus, the product as taught by the references would comprise isomaltulose as the only crystalline sweetener in combination with a non-crystalline sugar comprising maltitol and/or glucose syrup.

Applicant argues that no single reference teaches of the product as instantly claimed and that the combination of references is hindsight reconstruction. Applicant's argument is not convincing as (1) the rejection is a 103(a) rejection made over a combination of references and not a 102 rejection or a rejection made over a single reference; and thus the rejection represents the knowledge generally available to one of ordinary skill in the art and not the knowledge only presented by one reference; and (2) In response to applicant's argument that the examiner's conclusion of obviousness is

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based upon improper hindsight reasoning, it must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning; But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the applicant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971); and in the instant case proper motivation and obviousness has been established in the rejection as previously presented and as incorporated herein.

Applicant argues that the claims exclude the presence of sucrose which is not taught by the references. Applicant's argument is not convincing as Barrett teaches that all the sugar can be replaced with a sugar replacer (Column 4 lines 45-48) and Koji teaches that isomaltulose is preferably be the only crystalline sweetener in combination with a sugar syrup (page 6 lines 4-14). Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made for caramel to be sucrose free and the only crystalline sugar to be isomaltulose since Barrett teaches that all the sugar can be replaced with a sugar replacer; Koji teaches that isomaltulose is preferably the only crystalline sweetener in combination with a sugar syrup; and to do so would remove all of the sucrose in the caramel and maximize the benefit of the isomaltulose.

Applicant argues that the contention of the office action of the gum arabic and gellan gum being in a ratio of 5-15:1 is wrong because it is calculated based on the contention of the gellan gum being 0.5-5% which relates to the ingredients listed on column 2 lines 10-23, which do not include gellan gum. Applicant's argument is not convincing. Barrett teaches that the caramel includes gum arabic with one or more additional hydrocolloids including gellan gum (claims 15, 17, and 18), wherein the gum arabic is include in the product about 0-10%, preferably about 1-8% (column 4 lines 33-35). Barrett teaches that the one or more additional ingredients are present from about 0.5-5% of the confectionary (Column 2 lines 19-22). Thus, although Barrett does not explicitly state that the gellan gum is included from about 0.5-5%, as Barrett teaches that the gellan gum is an "additional" ingredient and that "additional ingredients" are included from about 0.5-5%, the suggestion from the teachings of the reference are that

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gellan gum, would be included from about 0.5-5%, and thus, the ratio of gum arabic to gellan gum would encompass a ratio of 5-15:1. Barrett, Column 2 lines 14-22, states the additional ingredients of the caramel included from about 0.5-5% comprise humectants, and Column 2 lines 23-28, states that the additional hydrocolloids include gellan gum.

Applicant argues that the teachings of Koji exclude the use of starch syrup and wheat flour with isomaltulose and since Barrett teaches of using starch, one of ordinary skill in the art would not combine the teachings of the references. Applicant's argument is not convincing as starch syrup is a sweetener including glucose and other sugars; the reference to starch syrup and wheat flour as taught by Koji do not exclude the use of oxidized starch as taught by Barrett.

Applicant argues that as Koji teaches its composition has good properties, such as formability, shape-retention, and texture, there is no reason to use polydextrose which is a bulking and texturizing agent as taught by Igoe in order to achieve properties already present. Applicant's argument is not convincing as previously stated, it would have been obvious to one of ordinary skill in the art at the time the invention was made for the caramel composition as taught by Barrett to include polydextrose in view of Igoe as Barrett teaches of a caramel composition which optionally comprises humectants (Column 2 lines 13-16), in which sugar can be replaced (Column 4 lines 45-48), and which includes citric acids (Column 5 lines 3-8) and Igoe teaches that polydextrose is a humectant and sugar replacer that contains citric acid. To use a conventionally known ingredient for its known and intended function would have been obvious and routine determination to one of ordinary skill in the art.

Applicant argues that Igoe does not suggest the polydextrose be present in a soft caramel base mass to prove an improved feeling while the caramel is ingested. Applicant's argument is not convincing as (1) an improved feeling on digestion is not claimed or referred to, and as (2) as Barrett teaches optional humectants and polydextrose is a humectant, the inclusion of the polydextrose in the caramel composition would have a reasonable expectation of success.

***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to KELLY BEKKER whose telephone number is (571)272-2739. The examiner can normally be reached on Monday through Friday 8am-4:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Keith Hendricks can be reached on (571) 272-1401. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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/Kelly Bekker/  
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Art Unit 1781